a titanium atom and a hydrocarbyloxy group, with a halogeno compound (A) of the 13(IIIa) or 14(IVa) group of elements in the periodic table of the elements, and an electron donor (B), wherein the solid catalyst component precursor (C) is a trivalent titanium atom-containing solid product obtained by reducing a titanium compound (2) represented by the following formula,

$$Ti(OR^1)_aX_{4-a}$$

wherein R^1 is a hydrocarbon group having 1 to 20 carbon atoms, X is a halogen atom, and "a" is a number satisfying $0<a\leq 4$ with an organomagnesium compound (3) in the presence of an organosilicon compound (l) having an Si-O bond.

31. The process for producing a solid catalyst component for olefin polymerization according to Claim 30, wherein the halogeno compound (A) is a compound represented by the following formula,

$$MR_{m-a}X_a$$

wherein M is an atom belonging to the 13(IIIa) or 14(IVa) group of elements in the periodic table of the elements, R is a hydrocarbon group having 1 to 20 carbon atoms, X is a halogen atom, m is a valence of M, and "a" is a number satisfying $0<a\leq m$.

32. The process for producing a solid catalyst component for olefin polymerization according to Claim 30, wherein the halogeno compound (A) is a compound represented by the following formula,

$$SiR_{4-a}X_a$$

wherein R is a hydrocarbon group having I to 20 carbon atoms, X is a halogen atom, and "a" is a number satisfying $0<a\leq 4$.

33. The process for producing a solid catalyst component for olefin polymerization according to Claim 30, wherein the electron donor (B) is an organic acid ester or an ether.

34. The process for producing a solid catalyst component for olefin polymerization according to Claim 30, wherein the electron donor (B) is a dialkyl ester of a phthalic acid.

35. The process for producing a solid catalyst component for olefin polymerization according to Claim 30, wherein the solid catalyst component precursor (C) is a trivalent titanium atom-containing solid product obtained by reducing a titanium compound (2) represented by the following formula,

$$Ti(OR^1)_aX_{4-a}$$

wherein R^1 is a hydrocarbon group having 1 to 20 carbon atoms, X is a halogen atom, and "a" is a number satisfying $0<a\leq 4$, with an organomagnesium compound (3) in the presence of an organosilicon compound (l) having an Si-O bond and a porous carrier (4).

36. The process for producing a solid catalyst component for olefin polymerization according to Claim 35, wherein the porous carrier (4) is an organic porous polymer,

37. A process for producing a catalyst for olefin polymerization, which comprises the steps of:

(i) contacting a solid catalyst component precursor (C) containing a magnesium atom, a titanium atom and a hydrocarbyloxy group, with a halogeno compound (A) of the 13(IIIa) or 14(IVa) group of elements in the periodic table of the elements, and an electron donor (B), wherein the solid catalyst component precursor (C) is a trivalent titanium atom-containing solid product obtained by reducing a titanium compound (2) represented by the following formula,

$$Ti(OR^1)_aX_{4-a}$$

wherein R^1 is a hydrocarbon group having 1 to 20 carbon atoms, X is a halogen atom, and "a" is a number satisfying $0<a\leq 4$, with an organomagnesium compound (3) in the presence of an organosilicon

compound (l) having an Si-O bond, to obtain a solid catalyst component (I) for olefin polymerization; and

(ii) contacting the solid catalyst component (I) with an organoaluminum compound (II).

38. A process for producing a solid catalyst component for olefin polymerization, which comprises the step of contacting an intermediate product with a compound (D) having a titanium-halogen bond, the intermediate product being obtained by contacting:

a solid catalyst component precursor (C) containing a magnesium atom, titanium atom and a hydrocarbyloxy group, with a halogeno compound (A′) of the 14(IVa) group of elements in the periodic table of the elements and an electron donor (B), wherein the solid catalyst component precursor (C) is a trivalent titanium atom-containing solid product obtained by reducing a titanium compound (2) represented by the following formula,

$$Ti(OR^1)_aX_{4-a}$$

wherein R^1 is a hydrocarbon group having 1 to 20 carbon atoms, X is a halogen atom, and "a" is a number satisfying $0<a\leq 4$, with an organomagnesium compound (3) in the presence of an organosilicon compound (l) having an Si-O bond.

39. The process for producing a solid catalyst component for olefin polymerization according to Claim 38, wherein the halogeno compound (A′) is a compound represented by the following formula,

$$MR_{m-a}X_a$$

wherein M is an atom belonging to the 14(IVa) group of elements in the periodic table of the elements, R is a hydrocarbon group having 1 to 20 carbon atoms, X is a halogen atom, m is a valence of M, and "a" is a number satisfying $0<a\leq m$.

40. The process for producing a solid catalyst component for olefin polymerization according to Claim 38, wherein the halogeno compound (A′) is a compound represented by the following formula,

$$SiR_{4-a}X_a$$

wherein R is a hydrocarbon group having 1 to 20 carbon atoms, X is a halogen atom, and "a" is a number satisfying $0<a\leq 4$.

41. The process for producing a solid catalyst component for olefin polymerization according to Claim 38, wherein the electron donor (B) is an organic acid ester or an ether.

42. The process for producing a solid catalyst component for olefin polymerization according to Claim 38, wherein the electron donor (B) is a dialkyl ester of a phthalic acid.

43. The process for producing a solid catalyst component for olefin polymerization according to Claim 38, wherein the solid catalyst component precursor (C) is a trivalent titanium atom-containing solid product obtained by reducing a titanium compound (2) represented by the following formula,

$$Ti(OR^1)_aX_{4-a}$$

wherein R^1 is a hydrocarbon group having 1 to 20 carbon atoms, X is a halogen atom, and "a" is a number satisfying $0<a\leq 4$, with an organomagnesium compound (3) in the presence of an organosilicon compound (l) having an Si-O bond and a porous carrier (4).

44. The process for producing a solid catalyst component for olefin polymerization according to Claim 43, wherein the porous carrier (4) is an organic porous polymer.

45. A process for producing a catalyst for olefin polymerization, which comprises the steps of:

(i) contacting an intermediate product with a compound (D) having a titanium-halogen bond, the intermediate product being obtained by contacting a solid catalyst component precursor (C)

containing a magnesium atom, titanium atom and a hydrocarbyloxy group, with a halogeno compound (A′) of the 14(IVa) group of elements in the periodic table of the elements and an electron donor (B), wherein the solid catalyst component precursor (C) is a trivalent titanium atom-containing solid product obtained by reducing a titanium compound (2) represented by the following formula,

$$Ti(OR^1)_aX_{4-a}$$

wherein R^1 is a hydrocarbon group having 1 to 20 carbon atoms, X is a halogen atom, and "a" is a number satisfying $0<a\leq 4$, with an organomagnesium compound (3) in the presence of an organosilicon compound (l) having an Si-O bond, to obtain a solid catalyst component (I′) for olefin polymerization; and

(ii) contacting the solid catalyst component (I′) with an organoaluminum compound (II).

46. A solid catalyst component for olefin polymerization comprising a magnesium atom, a titanium atom, a halogen atom and an electron donor, and having a relative surface area of 30 m^2/g or less.

47. The solid catalyst component according to Claim 46, which comprises the electron donor in an amount of about 10 wt% or more.

48. The solid catalyst component according to Claim 46, wherein the electron donor (B) is an organic acid ester.

49. The solid catalyst component according to Claim 46, wherein the electron donor (B) is a dialkyl ester of a phthalic acid.

50. A catalyst for olefin polymerization, which comprises an organoaluminum compound (II) and a solid catalyst component (I") for olefin polymerization comprising a magnesium atom, a